

# *Paepalanthus humilis* Sano, a New Species of Eriocaulaceae from Bahia State, Brazil

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**ABSTRACT.** *Paepalanthus humilis*, known only from Piatã, Bahia, Brazil, is described and illustrated. Its placement in *Paepalanthus* sect. *Actinocephalus* is clear, due to flowers and inflorescence features. The species is compared to *P. bahiensis* (Bongard) Kunth, *P. brachypus* (Bongard) Kunth, *P. ciliatus* (Bongard) Kunth, and *P. ochrocephalus* Koernicke, the species most similar to it.

**RESUMO.** *Paepalanthus humilis* é descrita e ilustrada. É incluída em *Paepalanthus* sect. *Actinocephalus* por características das flores e inflorescências. A espécie é comparada com *P. bahiensis* (Bongard) Kunth, *P. brachypus* (Bongard) Kunth, *P. ciliatus* (Bongard) Kunth e *P. ochrocephalus* Koernicke, as espécies mais próximas. *Paepalanthus humilis* é conhecida, até o momento, somente de Piatã, Bahia, Brasil.

*Paepalanthus* Kunth includes ca. 485 species (Mabberley, 1997) distributed in Africa, Central America, and South America. Central America has 13 species and Africa has 5, 2 of them endemic to Madagascar (Giulietti & Hensold, 1990). The greater number is concentrated in South America, in which 480 species occur in almost all countries of the continent (Moldenke, 1971). Central Brazil constitutes the center of diversity for the family, both in amount and diversity of species (Ruhland, 1914; Hensold, 1988). According to Giulietti and Hensold (1990), 407 species occur in this country, most of them endemic to the state of Minas Gerais.

***Paepalanthus humilis* Sano, sp. nov.** TYPE: Brazil. Bahia: Piatã, estrada Piatã–Inúbia, a ca. 25 km NW de Piatã, 13°04'19"S, 41°55'24"W, 1370 m.s.m., campo rupestre, com campos gerais e solo arenoso adjacente, 24 Feb. 1994, *P. T. Sano, S. Atkins, C. M. Sakuragui, R. M. Harley & V. C. Souza, CFCR 14523* (holotype, SPF; isotypes, ESA, F, HUEFS, K, SP). Figure 1.

Planta humillima. Rhizoma usque 4.0 cm longum, proferens folia rosulata 1.5–3.0 cm alta. Rami folia rosulata longitudini superantes. Spathae usque 6.0 mm longae, truncatae.

Rhizome 1.0–4.0 cm long, from which arise rosettes of leaves 1.5–3.0 cm long. Leaves linear-lanceolate to lanceolate,  $2.0\text{--}2.5 \times 0.2\text{--}0.25$  cm, adaxial surface puberulous to glabrescent, abaxial glabrous, margins with sparse, long cilia, apex acute, puberulous, base semiamplexicaul. Paraclades axillary to and longer than rosette leaves, 4.0–9.5(–17.5) cm long, sparsely villous, with long trichomes at the level of paracladial bract insertion; paracladial bracts lanceolate,  $0.5\text{--}2.0 \times 0.15\text{--}0.50$  cm, ciliate, apex acute, base semiamplexicaul. Spathe 3.0–6.0 mm long, membranaceous, glabrescent, loose; apex truncate, ciliate, lacerate. Scape 1.5–3.0 cm long, sericeous with long trichomes in apical portion. Capitula 3.0–5.0 mm diam., 2.0–4.0 mm tall, semiglobose. Involucral bracts disposed in 2 series, castaneous, oblong to obovate, concave,  $1.8 \times 1.1$  mm, ciliate, apex obtuse. Flowers ca. 38 per capitulum, with average of 29 staminate and 9 pistillate flowers in same capitulum. Floral bracts light castaneous, oblong to elliptic-oblong, naviculate, ca.  $1.5 \times 0.5$  mm, abaxial surface densely hairy at apex, trichomes tuberculate, apex acute in staminate flowers and obtuse to rounded in pistillate. Staminate flowers pedicellate, pedicel ca. 0.3 mm long; sepals light castaneous, obovate, strongly concave,  $1.3 \times 0.6$  mm, apex obtuse, abaxial surface hairy at apex, trichomes tuberculate; corolla infundibuliform, thick, 6-lobed, hyaline, lobes opposite, stamens acute, entire, lobes alternating with stamens bifid and shorter; stamens ca. 1.7 mm long; pistillodes 3, short-papillose. Pistillate flowers pedicellate; pedicel ca. 0.2 mm long; sepals light castaneous, spatulate, concave,  $1.6 \times 0.9$  mm, apex obtuse, abaxial surface densely hairy at apex, trichomes tuberculate, ring of hairs present at base of sepals; petals hyaline, elliptic, acute, flat, ca. 1.7 mm long, densely hairy at margin except apex; staminodes present, ca. 0.1 mm, scale-like; gynoecium ca. 2.1 mm, style branches filiform, longer than appendage, appendage ca. 0.4 mm, short-papillose.

*Paepalanthus humilis* was collected in Piatã, in the Serra do Atalho, Chapada Diamantina, Bahia,



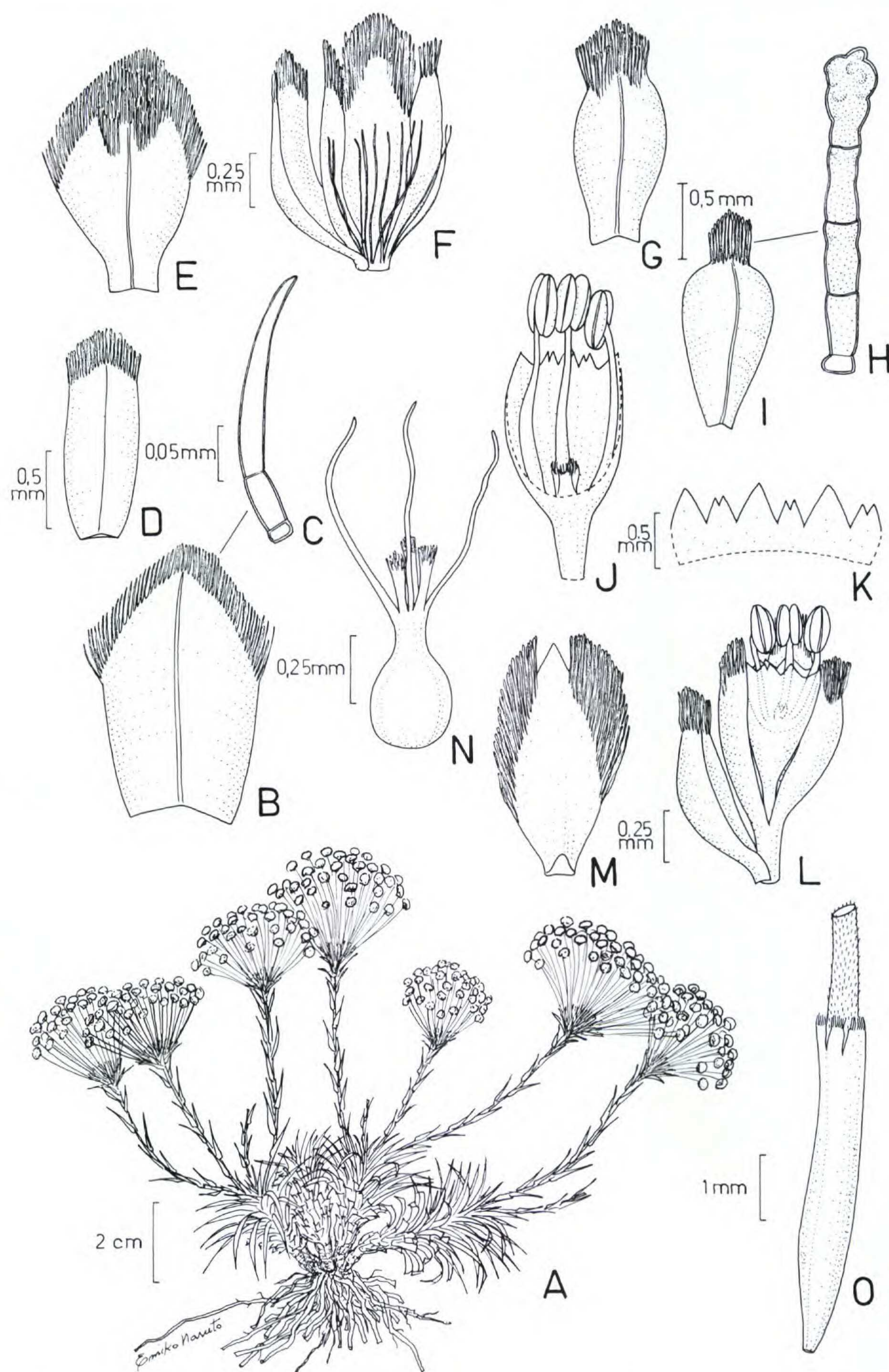


Figure 1. *Paepalanthus humilis* Sano. —A. Habit, showing rhizome from where rosettes arise. —B. Abaxial view of involucre bract. —C. Trichome of involucre bract. —D. Abaxial view of floral bract of pistillate flower. —E. Abaxial view of sepal of pistillate flower. —F. Pistillate flower showing ring of hairs at base of sepals. —G. Abaxial view of floral bract of staminate flower. —H. Tuberculate trichome of floral appendage. —I. Abaxial view of sepal in the staminate flower. —J. Longitudinal section of staminate flower showing stamens and pistillodes. —K. Detail of corolla lobes of staminate flower with shorter bifid lobes, alternate to entire ones. —L. Staminate flower. —M. Adaxial view of petal in pistillate flower petal showing scale-like staminode. —N. Gynoecium presenting styles longer than its appendage. —O. Detail of open spathe, showing truncate, split and ciliate apex. Drawn from P. T. Sano et al., CFCR 14523.



Brazil (13°04'19"S and 41°55'24"W), at 1372 m, growing in open sandy campo, between Gramineae and, at the moment, is known only from the type.

This species is placed in *Paepalanthus* sect. *Actinocephalus* Koernicke due to the following combination of features: scapes arranged in umbels, flowers trimerous, stigma simple, and trichomes tuberculate. The diagnostic features of *P. humilis* are the presence of tiny rosettes arising from the rhizome and the presence of reduced and truncate spathes. *Paepalanthus ciliatus* (Bongard) Kunth, *P. bahiensis* (Bongard) Kunth, *P. ochrocephalus* Koernicke, and *P. brachypus* (Bongard) Kunth are the most similar species with dwarf habits, a rare feature in *Paepalanthus* sect. *Actinocephalus*. However, *P. humilis* is the smallest species in the whole section, with rosettes less than 3.0 cm high, whereas *P. bahiensis*, the next smallest species, has rosettes higher than 10 cm.

*Paepalanthus ciliatus* is distinguished from *P. humilis* by the length of its spathes (16 mm), presence of a 3-lobed corolla in staminate flowers, style branches shorter than the appendage, and by its geographical distribution (endemic to Minas Gerais State). *Paepalanthus bahiensis* is distinguished by the presence of paracladia and stem leaves of the same size, the narrower and longer spathes (18.5 mm), which are glabrous, the staminate flowers having biparted corolla lobes, of the same size as the entire lobes, and by the pistillate flowers having style branches shorter than the appendage. *Paepalanthus ochrocephalus* is also known only from the type and is distinguished from *P. humilis* by the presence of divaricate trichomes on the margins of paracladial bracts, the length of the spathe (10 mm), the flexible and ridged scapes, and capitula with ochraceous hairs. *Paepalanthus humilis* has nondivaricate trichomes on the margins of paracla-

dial bracts and presents erect and smooth scapes. *Paepalanthus brachypus* has longer leaves, which are linear, patent, and densely hirsute; paracladia slightly flattened, flexible, and as long as the leaves; and is endemic to the Diamantina region, Minas Gerais. *Paepalanthus humilis* has lanceolate to linear-lanceolate, puberulous leaves, and cylindrical and erect paracladia.

Until now, five species of *Paepalanthus* sect. *Actinocephalus* were known from the state of Bahia: *P. polyanthus* (Bongard) Kunth, *P. hilairei* Koernicke, and *P. ramosus* (Wikström) Kunth, widely spread in the Brazilian "campos rupestres," and *P. ochrocephalus* and *P. bahiensis*, both endemic to Bahia. *Paepalanthus humilis* raises the number of species in *Paepalanthus* sect. *Actinocephalus* to 43 and raises the number of Bahian endemic species to 3.

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